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Quality of life of elderly people living in a retirement home

Kvalitet života starih osoba koje žive u gerontološkom centru

Sonja Čanković, Eržebet Ač Nikolić, Vesna Mijatović Jovanović, Svetlana Kvrgić, Sanja Harhaji, Ivana Radić

Institute of Public Health of Vojvodina, Novi Sad, Serbia; Faculty of Medicine, University of Novi Sad, Novi Sad, Serbia

Abstract

Background/Aim. The World Health Organization (WHO) identified four broad domains as being universally relevant to the quality of life, namely physical, and psychological health, social relationships, and environment. The aim of this study was to assess the relationship between sociodemographic characteristics and quality of life of old people. **Methods.** The World Health Organization Quality of Life BREF questionnaire (WHOQOL-BREF) was used to assess quality of life on a random sample of 200 people aged 60 years and over who lived in the Retirement Home in Novi Sad. Items within the questionnaire were organized into four domains: physical, psychological, social relationships and environment. **Results.** The majority of the participants were women (69.8%). The mean age was 79.2 years (SD = 6.6 years). Most of them were widowed (73.4%). More than two thirds of participants (68.8%) reported that they were ill at that moment and almost half of them (48.8%) had cardiovascular, 18.5% musculoskeletal, 9.6% endocrine and 5.9% neurological disease. In the social relations domain scores were lower in males (t = 2.4; p = 0.017). Scores of other domains did not differ significantly with regard to the age, educational level and the marital status of the participants. Participants who reported the presence of a disease had significantly lower mean scores of physical, psychological and environment domain. **Conclusion.** The presence of disease is a relevant factor for quality of life, whereas age, education and marital status do not reflect on physical health, psychological and environmental domain of quality of life.

Key words:
aged; homes for the aged; quality of life; questionnaires; serbia.

Apstrakt

Uvod/Cilj. Svetska zdravstvena organizacija je identifikovala četiri osnovna domena povezana sa kvalitetom života: fizičko i psihološko zdravlje, socijalne veze i okolina. Cilj rada bio je da se utvrdi povezanost između sociodemografskih karakteristika i kvaliteta života starih osoba. **Metode.** Za procenu kvaliteta života korišćen je upitnik Svetske zdravstvene organizacije o kvalitetu života – kratka verzija (*The World Health Organization Quality of Life* BREF *questionnaire* – WHOQOL-BREF) na slučajnom uzorku od 200 osoba starosti 60 i više godina koje žive u Gerontološkom centru u Novom Sadu. Pitanja u upitniku bila su organizovana u četiri celine: fizičko i psihološko zdravlje, socijalne veze i okolina. **Rezultati.** Većina ispitanika bile su osobe ženskog pola (69,8%). Prosečna starost iznosila je 79,2 godine (SD = 6,6 godina). Najviše je bilo udovaca i udovica (73,4%). Više od dve trećine ispitanika (68,8%) izjavilo je da su u trenutku istraživanja bili bolesni, a skoro polovina njih (48,8%) imala je kardiovaskularnu bolest, 18,5% mišićnokoštanu, 9,6% bolest endokrinih žlezda i 5,9% neurološku bolest. U domenu socijalnih veza skorovi su bili niži kod muškaraca (t = 2,4; p = 0,017). Drugi skorovi nisu se značajno razlikovali u odnosu na starost, nivo obrazovanja i bračni status ispitanika. Ispitanici koji su izjavili da su bolesni imali su značajno niže srednje vrednosti skora fizičkog i psihološkog zdravlja i domena okoline. **Zaključak.** Prisustvo bolesti je značajan faktor koji utiče na kvalitet života, pri čemu starost, obrazovanje i bračni status ne utiču na domen fizičkog i psihološkog zdravlja i domen okoline kvaliteta života.

Ključne reči:
stare osobe; starački domovi; kvalitet života; upitnici; srbija.

Introduction

Quality of life (QoL) is not a new concept. Jonathan Swift noted that every man desires to live long, but no man wishes to be old. Isaac Stern had expressed a similar statement when he advised that everyone should die young, but they should delay it as long as possible [1]. The core of the QoL concept is to understand a human being and its needs, from different perspectives, keeping in mind that a human being is in constant interaction with the surroundings, according to the holistic-ecological approach [2]. Quality of life spans a broad range of topics and disciplines. It is made up

Correspondence to: Eržebet Ač Nikolić, Futoska 121, 21 000 Novi Sad, Serbia. Phone: +381 21 489 7846, +381 64 563 519.
E-mail: sonja.cankovic@izjzv.org.rs

of both positive and negative experiences and affect. It is a dynamic concept, which poses further challenges for measurement [3]. After a long scientific discussion, quality of life is still a concept which is difficult to define. The World Health Organization (WHO) Quality of Life Group developed a definition frequently used in theoretical framework. WHO defines quality of life as an individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept, incorporating in a complex way a person's beliefs and relationship to salient features in the environment [4].

Ageing is unprecedented, a process without parallel in the history of humanity. At the world level, the number of older persons is expected to exceed the number of children for the first time in 2045. In the more developed regions, where population ageing is far advanced, the number of children dropped below that of older persons in 1998. It is an enduring process. Since 1950, the proportion of older persons has been rising steadily, passing from 8% in 1950 to 11% in 2009, and is expected to reach 22% in 2050 [5]. People in Europe are older than any other world region. According to the United Nations Population Fund, 2012 in Serbia people over 60 accounted for 20.5% and are expected to increase to 32.2% in 2050 [6]. The ageing of population in Serbia, as well as the whole world population, is the problem which we have to face with.

The elderly in the future will undoubtedly suffer from a variety of diseases leading to disability and reduced quality of life [7]. The interests of the elderly and improving the quality of life in this age, including their health concerns, need to be a priority in the coming years.

Bilgili and Arpacı [8] in a recent study stated that QoL of elderly people needs to be more analyzed, since the majority of recent studies were focused on instrument psychometric characteristics and less on QoL of this population group.

The aim of this study was to assess the relationship between the socio-demographic characteristics and the quality of life of old people living in retirement home.

Methods

The study was conducted in 2009 on a sample of 200 people, representing 25% of the total number of residents of The Retirement Home. Systematic random sample (k = 4) was used in this study. Through random selection, every fourth person from the list of residents of The Retirement Home, which satisfied the criteria, was chosen to participate in this research. The criteria were: aged 60 years or older, able to communicate and oriented in all three directions, the respondent not situated in the stationary part of the home. Data was collected through interviews done by researchers. Ethical approval was obtained from the Faculty of Medicine in Novi Sad. A letter of introduction describing the study was given and a written informed consent was obtained from all the participants before interviewed questioning with the WHOQOL-BREF questionnaire.

The Bosnian-Croatian-Serbian version of WHOQOL-BREF was used in this study and this language version was obtained from The WHOQOL Group. The WHOQOL-BREF is an abbreviated 26-item version of the WHOQOL-100 and it is based on four domain structure (Physical health, Psychological, Social relationships and Environment). Each domain includes three to eight items. Moreover, two questions yield information on the global QoL, and health satisfaction. Each item is based upon self-report and scored on a 5-point Likert scale. The scores are transformed on a scale from 0 to 100 (higher score points to better quality of life). The time frame for responses was the previous two weeks. An additional 6 questions were included concerning sociodemographic characteristics such as age, gender, marital status and educational level, as well as the present health status. The results from 23 countries showed good internal consistency reliability and construct validity for the international WHOQOL-BREF questionnaire [9]. The sensitivity of the questionnaire for assessing quality of life of elderly people who living in the retirement home was tested by examining the validity and reliability. It is a valid and reliable quality of life instrument for older people [10].

Statistical analysis was performed using the statistical package SPSS 14.0 for Windows. Results are given as mean value and proportion. Differences in sample means were tested by Student's *t*-test (to compare means of the two groups) and ANOVA (to test differences between more than two groups). The level of statistical significance was set at $p < 0.05$.

Results

Of the 200 subjects interviewed, 199 were analyzed (one case was deleted with more than 20% missing data). Table 1 shows sociodemographic characteristics as well as the presence of disease in the study group.

Table 1
Distribution of the sociodemographic characteristics and the presence of disease in the study group

Sociodemographic characteristics	n (%)
Sex	
male	60 (30.2)
female	139 (69.8)
Age (years)	
60–69	20 (10.1)
70–79	71 (35.7)
≥ 80	108 (54.3)
Education	
none at all, primary school	80 (40.6)
high school no degree	31 (15.8)
high school degree	49 (24.6)
college degree and above	37 (18.7)
Marital status	
separated, divorced	34 (17.1)
with partner	19 (9.5)
widowed	146 (73.4)
Presence of disease	
yes	137 (68.8)
no	62 (31.2)

The majority of participants were women (69.8%). The highest percentage of respondents was found in the age group 80+ (54.3%). The mean age was 79.2 years (SD = 6.6, range 63–97 years). With regard to education level, 40.6% indicated no education or primary school, 15.8% high school

without degree, 24.6% high school degree and 18.7% college degree and above. Most of them were widowed (73.4%). More than two thirds of participants (68.8%) reported that they were ill at that moment and almost half of them (48.8%) had a cardiovascular disease, 18.5% a musculoskeletal, 9.6% endocrine and 5.9% a neurological disease. The most frequently reported diagnosis was angina pectoris (15.6%).

Scores were lower in males in the social relations domain ($t = 2.4$; $p = 0.017$). The scores of the other three domains (physical health, psychological and environment) as well as total score did not differ significantly with regard to the gender. There was no significant association between age, educational level, marital status of participants and scores of all domains. The participants who reported the presence of a disease had significantly lower mean scores of the physical health ($t = 5.2$; $p = 0.000$), psychological health ($t = 3.1$; $p = 0.002$), and environment domain ($t = 2.2$; $p = 0.029$) and total WHOQOL-BREF score ($t = 3.7$; $p = 0.000$) (Table 2).

Our study examined the quality of life of elderly people living in a retirement home. The study included respondents who use this facility primarily as a residence place and they are capable to take care of themselves independently. However, we should take into account the specific characteristics of life in the community, therefore the findings cannot be completely generalized to the whole population of old people, or it should be done with caution.

In this study one of three respondents considered himself healthy. The most frequently reported diagnoses were from the cardiovascular diseases group. A similar result was obtained in a study performed on elderly people living in rural areas in Turkey. Almost one third of the elderly had no medically diagnosed chronic disease, while the three most frequently occurring chronic diseases were hypertension, rheumatism-related diseases and diabetes [11]. A Taiwan study showed that 10% of the elderly had no medically diagnosed diseases and the most frequent disease were hypertension, stroke, musculo-skeletal diseases and diabetes [14]. Participants who had some kind of disease scored all domains but social relations significantly lower than those who had not.

Table 2

Mean score of all domains and the World Health Organization Quality of life – BREF questionnaire (WHOQOL-BREF) sociodemographic characteristics, and the presence of disease in the study group

	Domains mean score				
Sociodemographic characteristics	Physical health	Psychological health	Social relations	Environment	WHOQOL-BREF
Sex					
male	70.0	68.5	60.7	71.2	67.6
female	64.7	63.7	67.8	66.4	65.6
t	1.75	1.53	2.4	1.9	0.84
p	0.082	0.126	0.017	0.056	0.401
Age (yars)					
60–69	66.9	66.7	64.8	66.7	66.3
70–79	66.1	64.9	65.1	68.0	65.9
≥ 80	66.4	64.9	66.2	67.9	66.3
F	0.01	0.06	0.08	0.05	0.02
p	0.987	0.937	0.919	0.946	0.978
Education					
none at all, primary school	63.1	62.9	65.2	65.5	64.0
high school no degree	73.8	67.4	71.8	70.4	70.8
high school degree	67.7	65.4	64.8	69.6	66.9
college degree and above	65.8	66.9	62.5	68.2	65.8
F	2.3	0.54	1.4	1.0	1.44
p	0.075	0.655	0.252	0.393	0.231
Marital status					
separated, divorced	67.9	67.8	64.5	68.2	67.1
with partner	64.7	68.2	64.2	70.4	66.9
widowed	66.2	64.1	66.1	67.4	65.9
F	0.17	0.19	0.14	0.3	0.1
p	0.837	0.489	0.869	0.752	0.898
Presence of disease					
yes	61.8	62.2	64.3	66.2	63.5
no	76.4	71.5	68.6	71.6	72.0
t	5.2	3.1	1.4	2.2	3.7
p	0.000	0.002	0.147	0.029	0.000

***t* – Student's *t*-test; F – ANOVA.**

Discussion

Aging causes health and social problems. It means that elderly people have to deal with certain obstacles and difficulties. In addition, there is a lack of everyday activities and the quality of life begins to decline [11]. However, there are studies which reported a higher quality of life in the elderly compared with younger people [12, 13].

Considering gender differences, only the social relations domain was significantly lower in men. Scores of other domains were higher in men, but the difference was not significant. Barua et al. [15] revealed that scores of all four domains had not been affected by gender. A study conducted in

Austria on persons aged 57–70 and older than 70 showed that women from a younger age group had higher values of the physical health domain, compared to men, in contrast to women older than 70 years, but in both cases difference was not significant [16]. Other studies confirmed that values of this domain were statistically higher in men [11, 17]. The same result considering psychological health domain was reported in the literature [15, 16, 18]. On the other hand, women had lower values of this domain in the study of Arslantas et al. [11]. Scientists discovered that the loss of physical ability is more expressed in old aged women and this often can lead to depression [19, 20]. How important the gender difference is in quality of life was discussed in a study of Kirchengast and Haslinger [16] who found that older women, especially those aged over 70 years, were more likely to live alone; of these women 47.6% were widowed. In contrast, only 5.4% males same age, like the female group, lived without a partner and only 2.7% were widowed. Besides that, women had significantly less stable employment histories, lower income, and lower pensions than men. All of these factors can cause disorders in the psychological sphere of the quality of life.

Contrast to our results, gender did not affect the social relations domain in several studies [11, 15–17]. Consistent with previous research the environmental domain score did not differ significantly according to gender [15, 16]. Also, environment domain did not show differences between groups concerning other sociodemographic characteristics, probably due to the fact that all participants live in retirement home, therefore they probably have the same living condition, have same opportunity for leisure, similar means of transportation and health services.

There were no statistically significant differences in the average values of the physical health domain according to age in this study, although the opposite could have been expected on the basis of the results of the previous research. Older age is associated with the deterioration of physical abilities that has an affect on the quality of life [11, 15, 17]. Our results suggest that older adults were able to actively adjust the physical changes that appear with aging and kept a positive attitude towards it. On the other hand, the respondents from our study lacked positive feelings, or thought they did not know how to enjoy life. There were no statistically significant differences in mean values of psychological health domain according to the age group even though the youngest group (60–69 years) had the highest value. Perhaps it could be explained by the fact that significant changes in life and psychological adaptation on new situation appear by the age of 65, therefore all later changes are of less importance.

Social factors such as social integration, having a purpose in life and community affiliation were identified as very important factors for the quality of life in older people [21]. Other factors include self-esteem, a sense of their personality and their identity, sense of control, and spiritual well-being. These concepts are important for older people, giving them a positive view of themselves, and have an impact on the relationship with their friends and family in their activities. It is also important to their ability to handle, adapt to change and make sense of their life [22]. Higher-level social companionship was associated with the development of less depression [23]. The social relations domain was represented with only 3 items (personal relationships, social support and sexual activity). The sexual activity item had the lowest response rate in the whole questionnaire (60%), similar to previous research [14, 24]. The average age of participants (79.2 years) could be cause of the low response rate of this item, moreover 73.4% of them were widowed, but cultural and psychological elements also cannot be omitted.

In our study, educational level did not have influence on the quality of life of old people living in a retirement home. The same conclusion was in made the previous research done in geriatric population [15, 25].

Marital status was not associated with significant changes in the quality of life in our study. Hagedoorn et al. [26] deeply explained the role of marriage. It seems that marriage does not protect the elderly from psychological pain, and widows are apparently able to adapt well to their new role as an individual. No doubt that marriage has its advantages (spouse support, friendship and self-esteem), especially if marriage is harmonious, however, these benefits do not explain the higher levels of distress among single people. Singles also have lasting and significant interpersonal relationships from which they can gain the benefit. It can cautiously be concluded that marriage can be harmful if people feel undervalued and dissatisfied in marriage [26].

There are several limitations of the study. It included only the residents of retirement home, not the general population aged 60 and more.

The participants in our study were mostly from the group 80 or older and widowed. But, despite the limitation, the authors wish to emphasize that this topic is less explored in Serbia, therefore, any contribution is a step forward in efforts to improve quality of life of elderly. The results also provide the basis for those wishing to use WHOQOL-BREF instrument to investigate the quality of life of elderly.

Conclusion

The presence of disease is a relevant factor for quality of life, whereas age, education and marital status do not reflect on physical health, psychological health and environmental domain of quality of life.

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